FEASIBILITY STUDY ADDENDUM
SITE 1 – FORMER DRUM MARSHALLING AREA

NOVEMBER 2016 RESTORATION ADVISORY BOARD

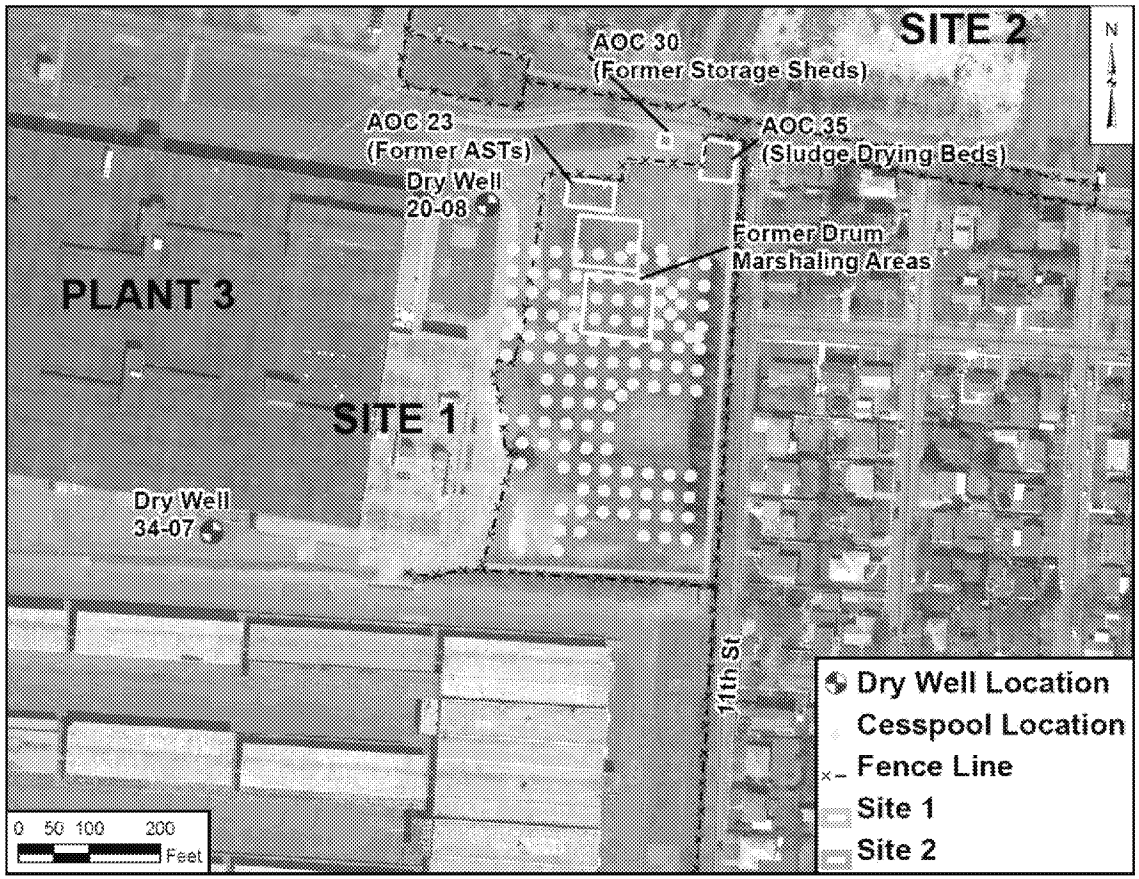
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT BETHPAGE
LONG ISLAND, NEW YORK

11/16/2016

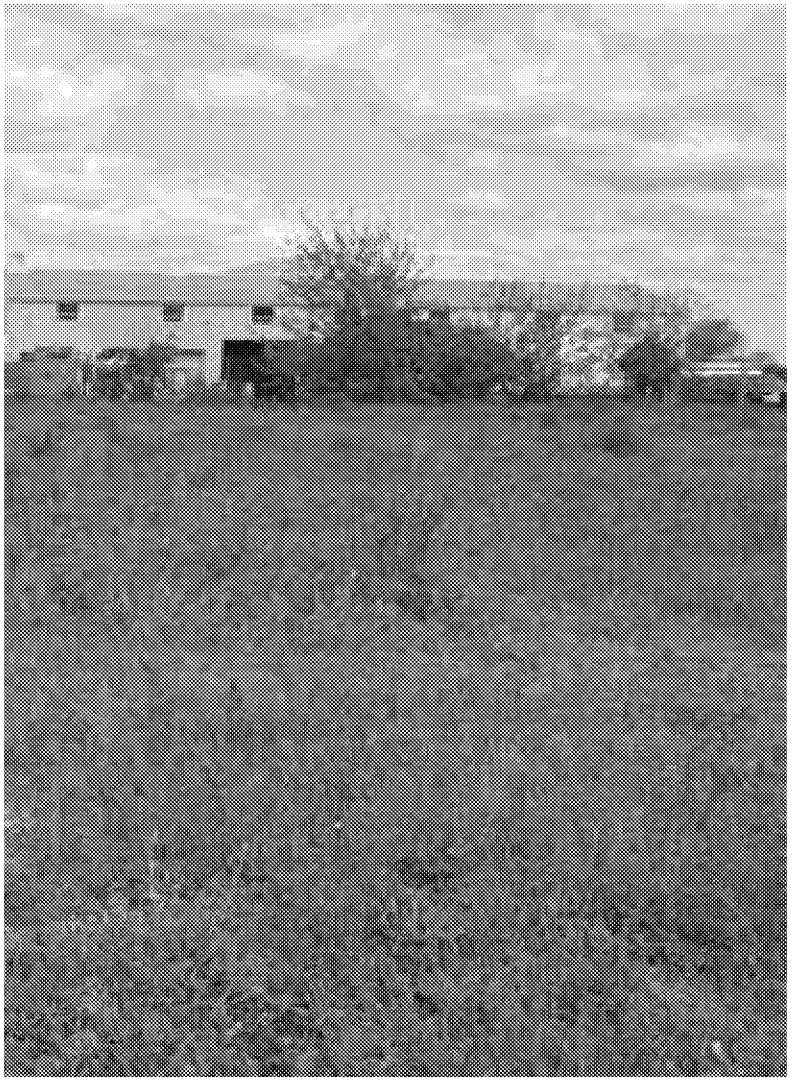
Site 1 History

- Two former drum marshaling pads
- 120 abandoned cesspools for sanitary waters from Plant 3

- Drywells – Area of Concern (AOC) 34-07 and AOC 20-08 for storm water
- AOC 23-Former Aboveground Storage Tanks (ASTs),
- AOC 35-Former Sludge Drying Beds, and
- AOC 30-Storage Sheds



Site 1 - 2016 Photographs



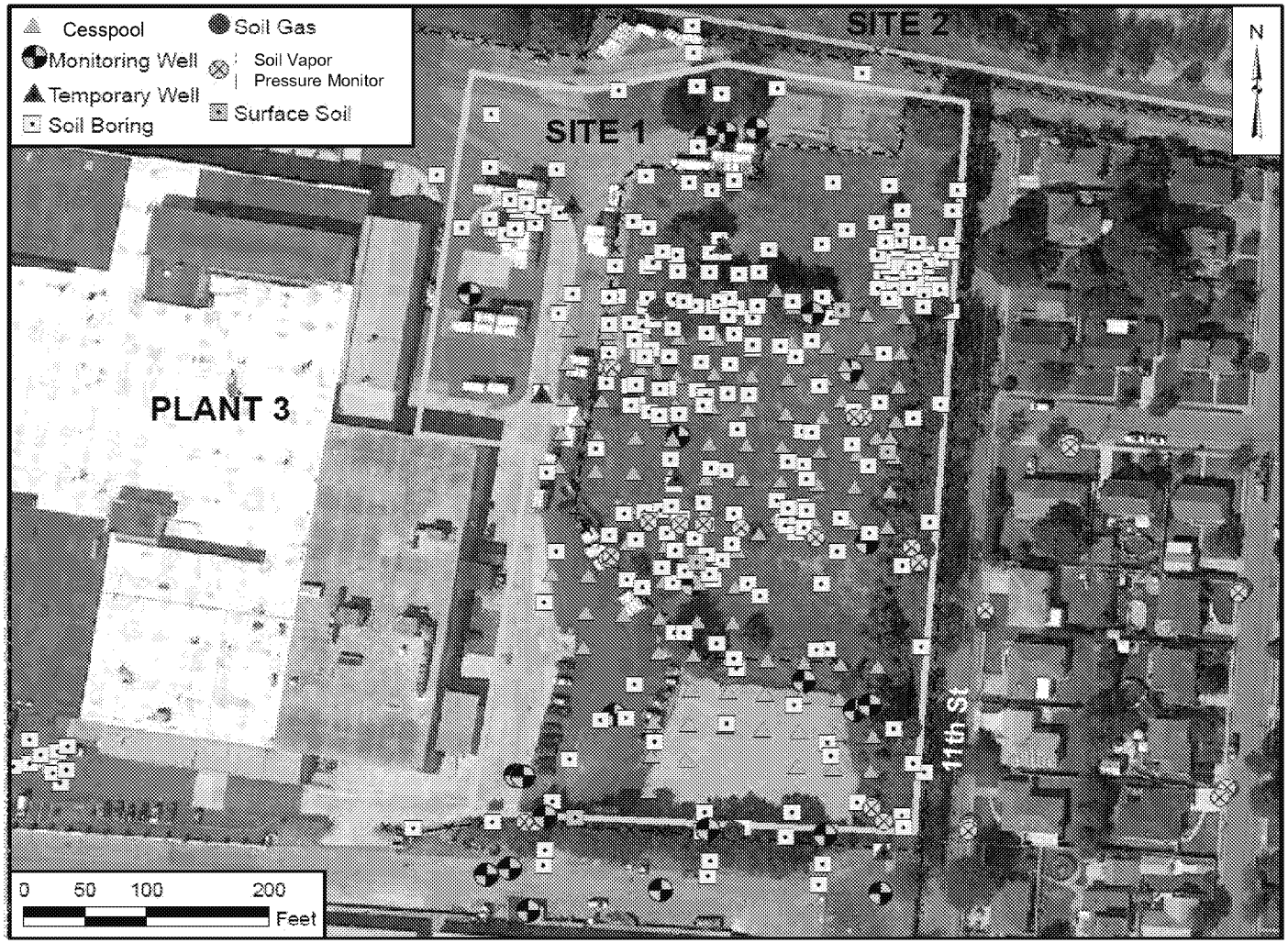
Site 1 History

Remedial Site Activities

- 1992 to1995- Initial investigations and Remedial Decision, chemical of concern:
  - –Polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs), and metals
- 1995 to 2008- Additional investigations conducted, volume of PCB-impacted soil increased from 1,400 cubic yards to over 38,000 cubic yards
- 1997 to 2002- Source area cleanup volatile organic compound (VOC)-impacted soil and shallow local groundwater
  - –Air Sparging/Soil Vapor Extraction (SVE) Remediation System
  - –4,520 pounds of VOCs had been extracted and treated
  - –Achieved greater than 95% reduction of VOCs in groundwater
- 2009 to 2013- Supplemental soil and groundwater investigations
- 2010 to 2016- SVE Containment System operates to address vapor intrusion
- 2015 Remedial Investigation Addendum

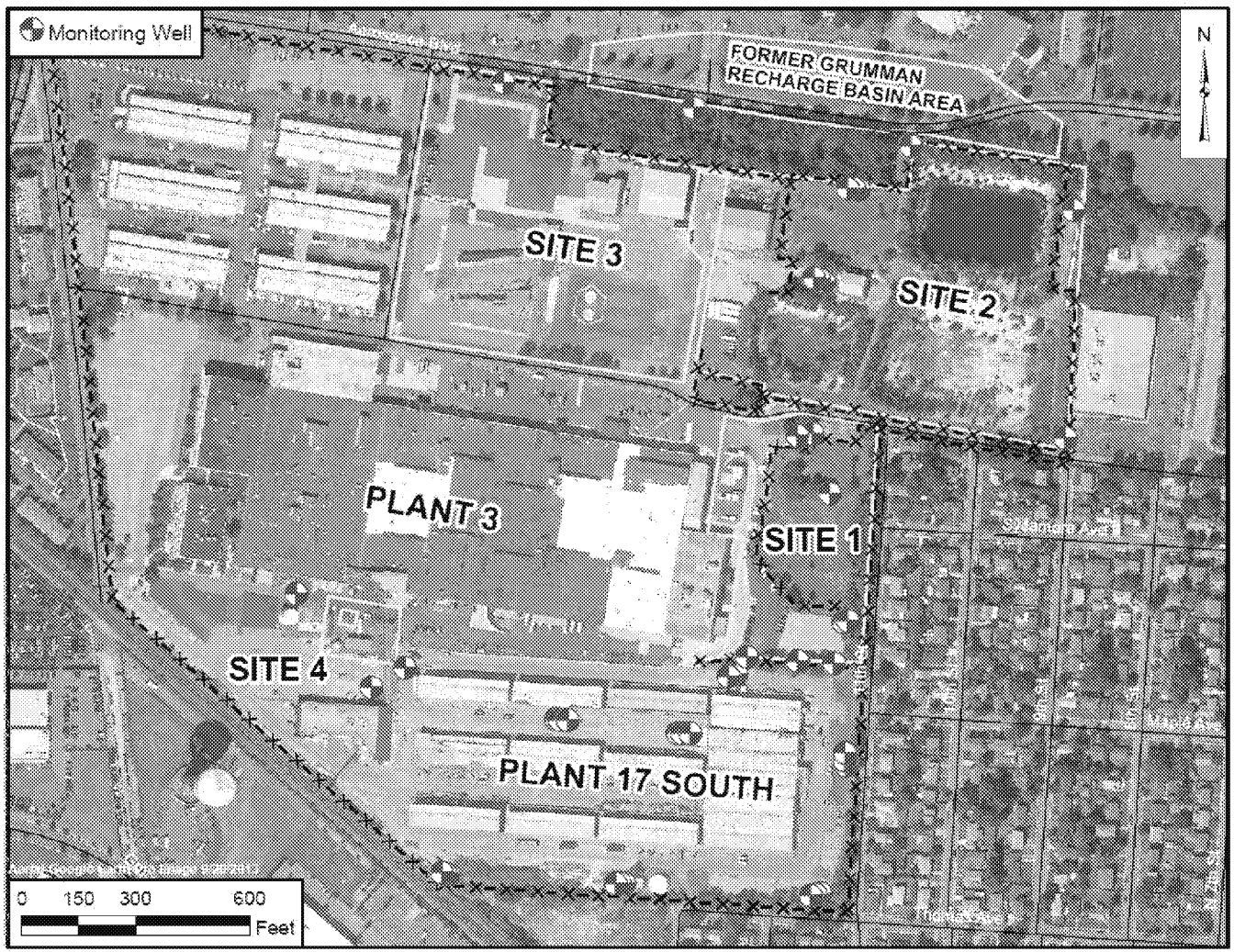
Site 1 Remedial Investigation Addendum

Field Activities (1991 to present)



Site 1 Remedial Investigation Addendum

Groundwater Field Activities (2009 to 2013)

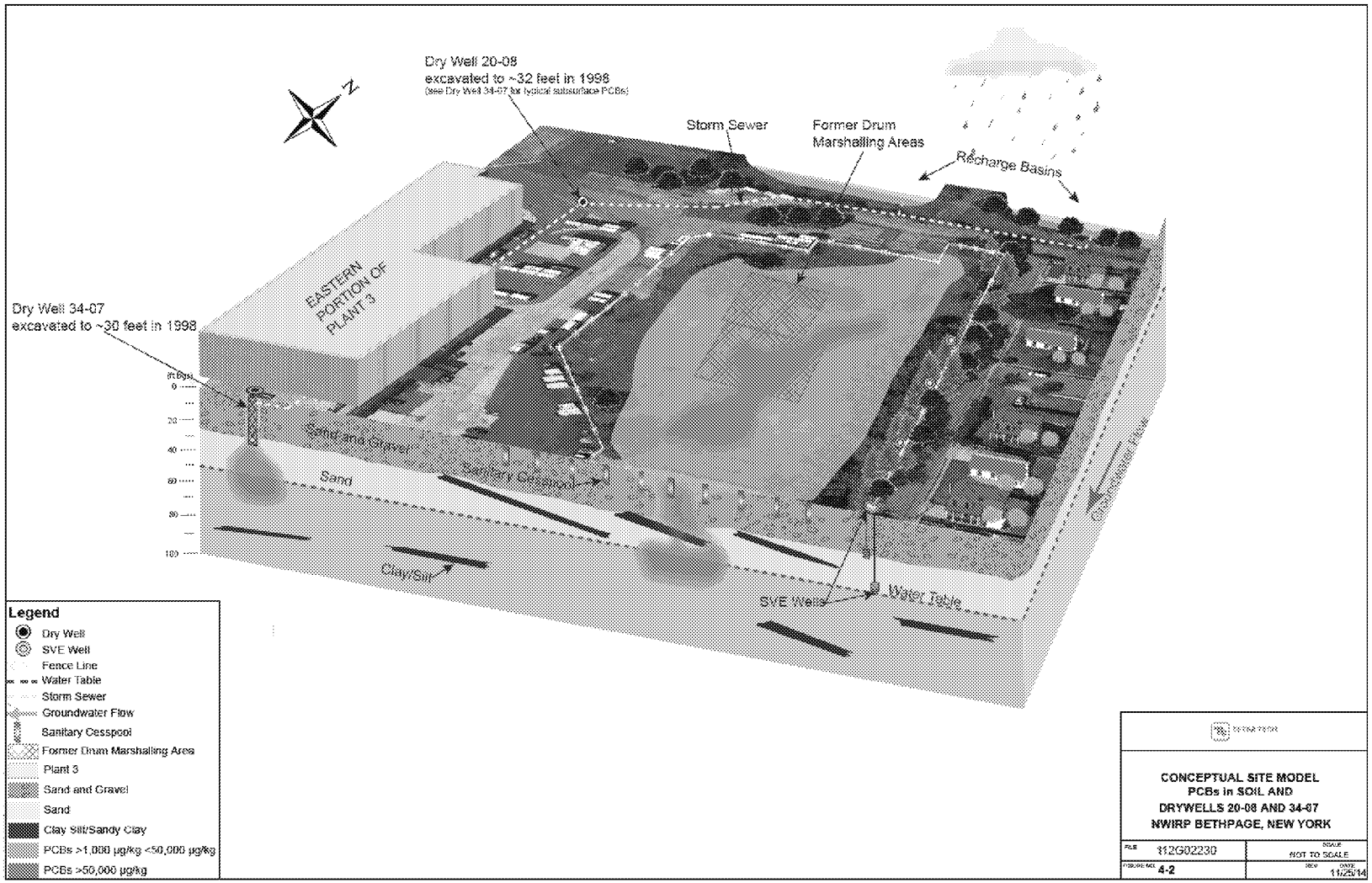


Site 1 Remedial Investigation Addendum

- Media and chemicals to be addressed:
  - –Soil: Polychlorinated biphenyls (PCBs), chlordane, polynuclear aromatic hydrocarbons, metals
  - –Groundwater: PCBs, arsenic, and hexavalent chromium
  - –Soil Vapor (Vapor Intrusion): Tetrachloroethene and trichloroethene

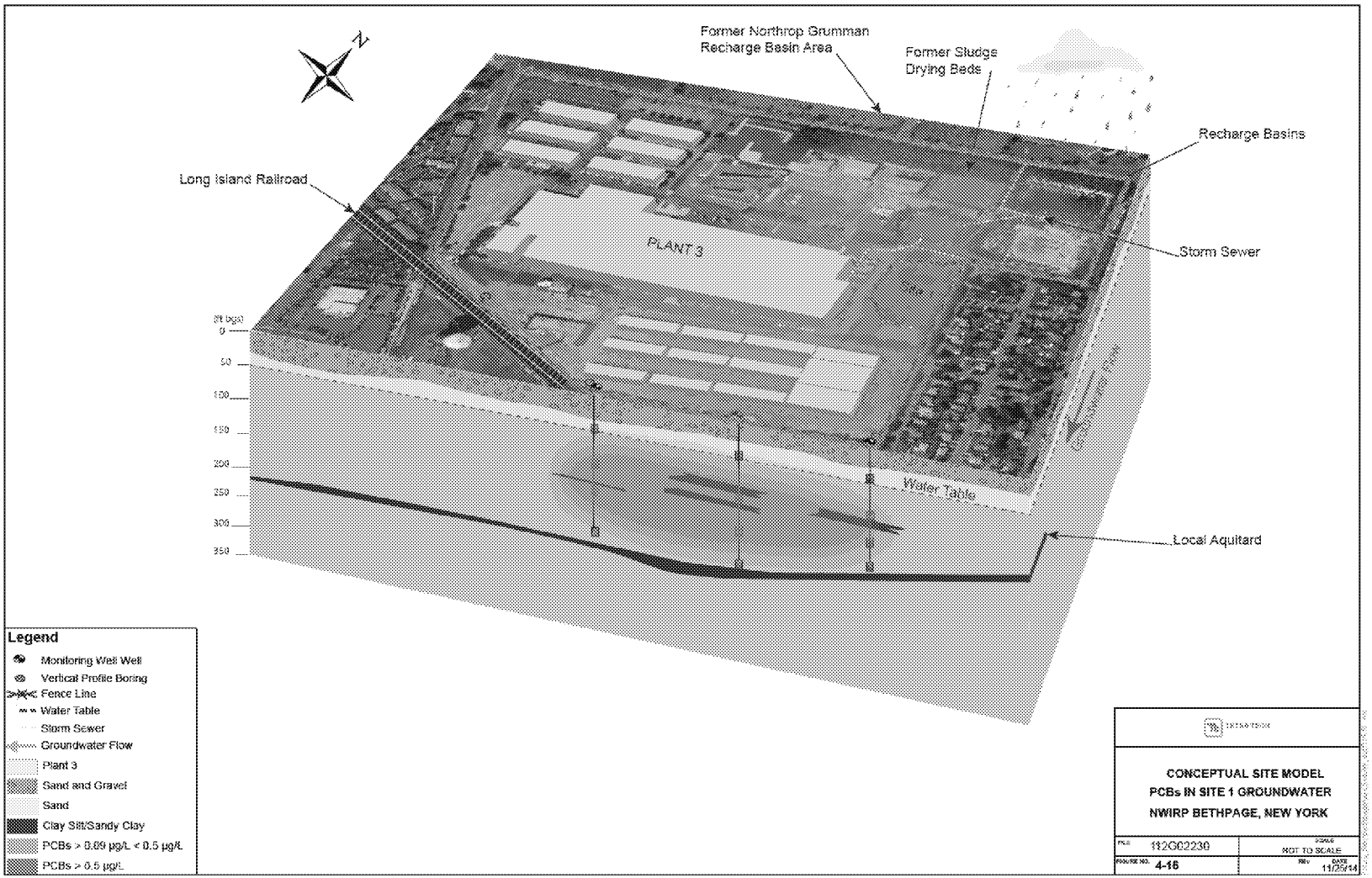
Site 1 Remedial Investigation Addendum

Results - PCBs in Soil



Site 1 Remedial Investigation Addendum

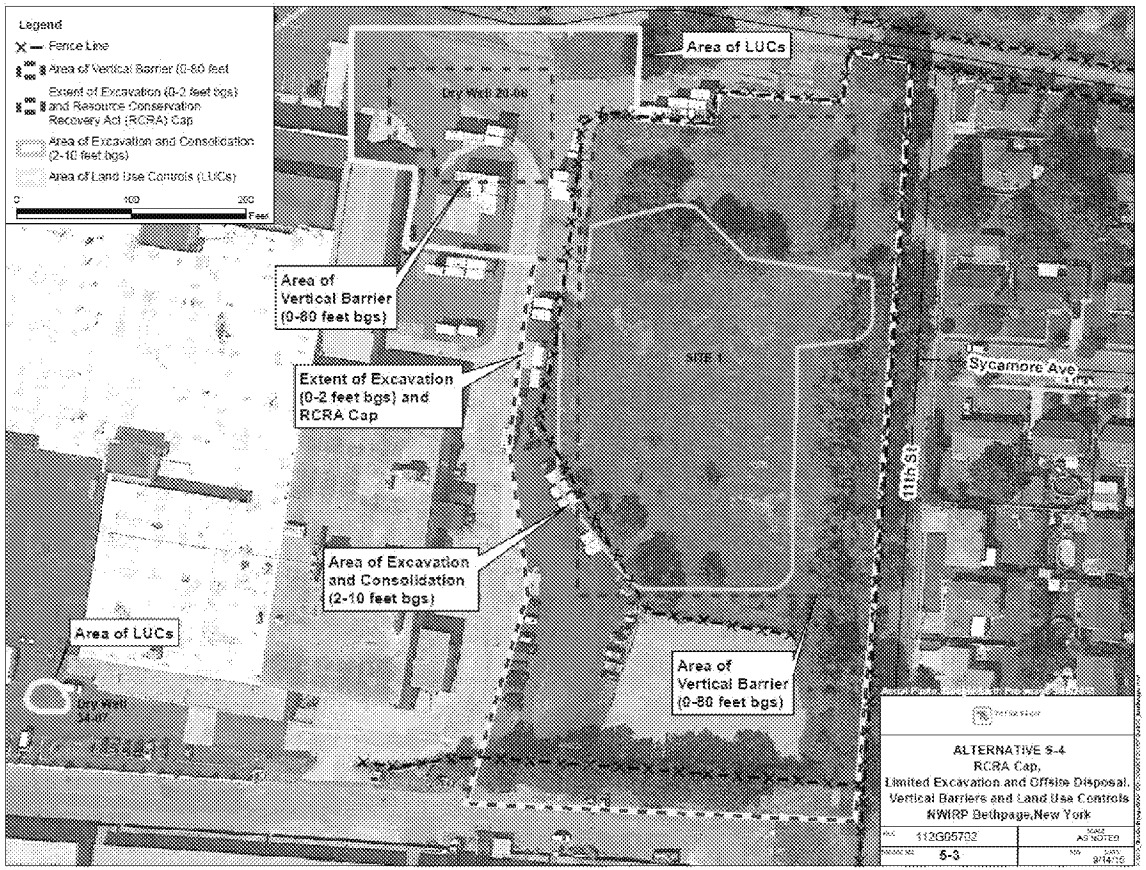
Results – PCBs in Groundwater



Site 1 Feasibility Study Addendum

Soil Alternatives

- S-1: No Action
- S-2: Permeable Cover, Limited Excavation and Offsite Disposal of PCB-Contaminated Soil (Greater than 10 mg/kg), and Land Use Controls
- S-3: RCRA Cap, Limited Excavation and Offsite Disposal of PCB-Contaminated Soil (Greater than 25 mg/kg), and Land Use Controls
- S-4: RCRA Cap, Limited Excavation and Offsite Disposal of PCB-Contaminated Soil (Greater than 25 mg/kg), Vertical Barrier, and Land Use Controls

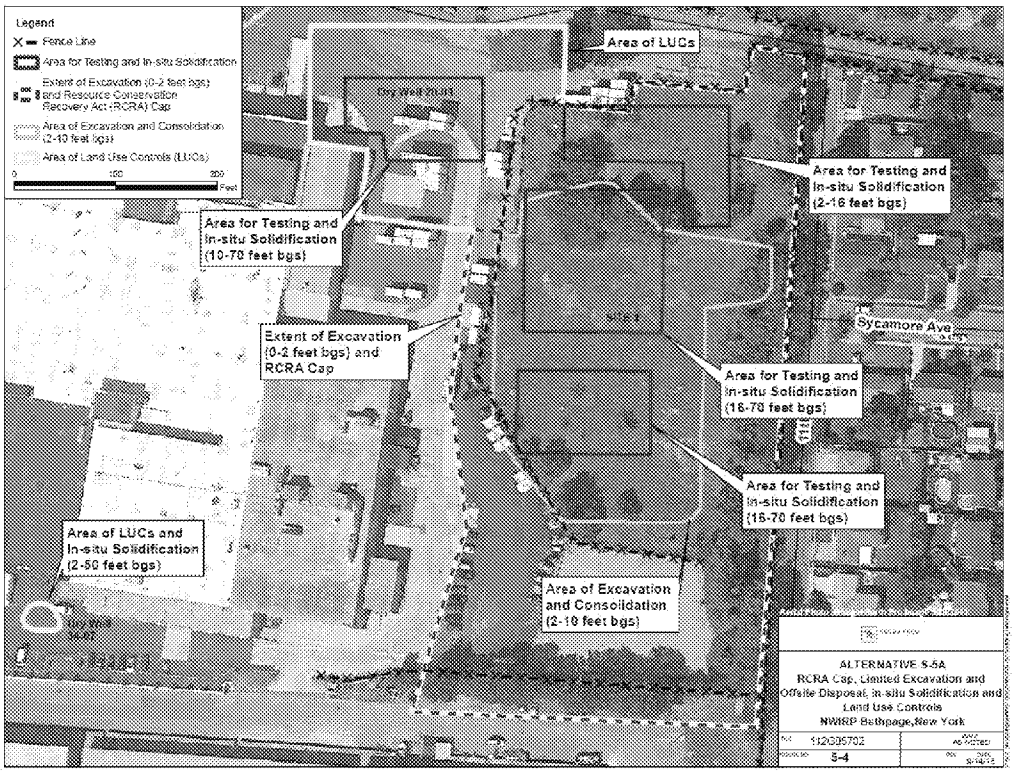


RCRA – Resource Conservation and Recovery Act
mg/kg – milligram per kilogram

Site 1 Feasibility Study Addendum

Soil Alternatives

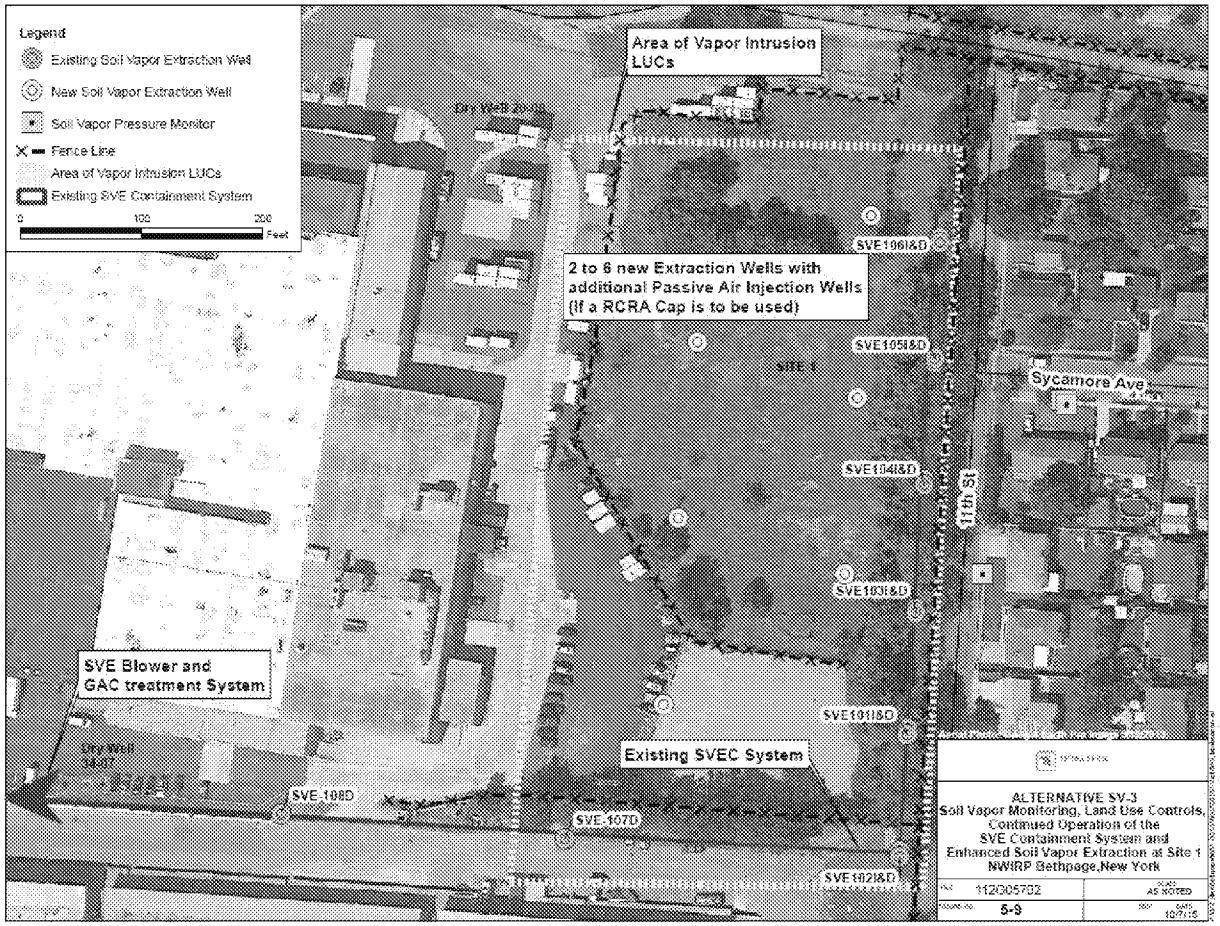
- S-5A: RCRA Cap, Limited Excavation and Offsite Disposal of PCB-Contaminated Soil (Greater than 25 mg/kg), In-situ Solidification of PCB-Contaminated Soil (Greater than 50 mg/kg), and Land Use Controls
- S-5B: RCRA Cap, Limited Excavation and Offsite Disposal of PCB-Contaminated Soil (Greater than 25 mg/kg), Vertical Barrier, In-situ Solvent Extraction of PCB-Contaminated Soil (Greater than 50 mg/kg), and Land Use Controls
- S-6: Excavation and Offsite Disposal of PCB-Contaminated Soil (Greater than a Depth-Dependent 10 mg/kg or 50 mg/kg), Soil Cover, and Land Use Controls
- S-7: Excavation and Offsite Disposal of PCB-contaminated soil (Greater than 1 mg/kg)



Site 1 Feasibility Study Addendum

Soil Vapor Alternatives

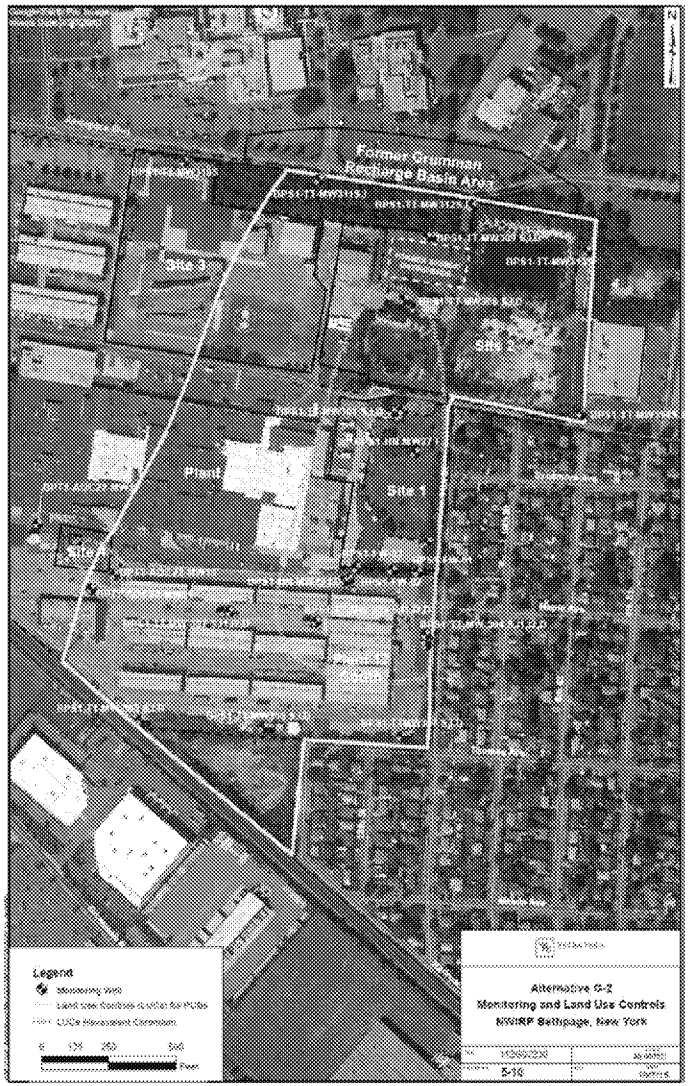
- SV-1: No Action
- SV-2: Soil Vapor Monitoring, Land Use Controls, and Continued Operation of the SVE Containment System
- SV-3: Soil Vapor Monitoring, Land Use Controls, Continued Operation of the SVE Containment System, and Enhanced Soil Vapor Extraction at Site 1



Site 1 Feasibility Study Addendum

Groundwater Alternatives

- G-1: No Action
- G-2: Monitoring and Land Use Controls
- G-3A: Monitoring, Land Use Controls, and Upgrade of the ONCT System with GAC Treatment
- G-3B: Monitoring, Land Use Controls, and Upgrade of the ONCT System with Ion Exchange Treatment



Path Forward

- 2017 Proposed Plan (45-day public comment period)
- Public Meeting in Jan/Feb 2017 (to be announced)
- 2017 Record of Decision
- 2017 Design
- 2018 Start Cleanup